

**What is claimed is:**

1. An isolated polynucleotide comprising a nucleotide sequence that has at least 80% identity over its entire length to a nucleotide sequence encoding the TR7 polypeptide of SEQ ID NO:2; or a nucleotide sequence complementary to said isolated polynucleotide.
2. The polynucleotide of claim 1 wherein said polynucleotide comprises the nucleotide sequence contained in SEQ ID NO:1 encoding the TR7 polypeptide of SEQ ID NO2.
3. The polynucleotide of claim 1 wherein said polynucleotide comprises a nucleotide sequence that is at least 80% identical to that of SEQ ID NO: 1 over its entire length.
4. The polynucleotide of claim 3 which is polynucleotide of SEQ ID NO: 1.
5. The polynucleotide of claim 1 which is DNA or RNA.
6. A DNA or RNA molecule comprising an expression system, wherein said expression system is capable of producing a TR7 polypeptide comprising an amino acid sequence, which has at least 80% identity with the polypeptide of SEQ ID NO:2 when said expression system is present in a compatible host cell.
7. A host cell comprising the expression system of claim 6.
8. A process for producing a TR7 polypeptide comprising culturing a host of claim 7 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture.
9. A process for producing a cell which produces a TR7 polypeptide thereof comprising transforming or transfecting a host cell with the expression system of claim 6 such that the host cell, under appropriate culture conditions, produces a TR7 polypeptide.

10. A TR7 polypeptide comprising an amino acid sequence which is at least 80% identical to the amino acid sequence of SEQ ID NO:2 over its entire length.
11. The polypeptide of claim 10 which comprises the amino acid sequence of SEQ ID NO:2.
12. An antibody immunospecific for the TR7 polypeptide of claim 10.
13. A method for the treatment of a subject in need of enhanced activity or expression of TR7 polypeptide of claim 10 comprising:
  - (a) administering to the subject a therapeutically effective amount of an agonist to said receptor; and/or
  - (b) providing to the subject polynucleotide of claim 1 in a form so as to effect production of said receptor activity *in vivo*.
14. A method for the treatment of a subject having need to inhibit activity or expression of TR7 polypeptide of claim 10 comprising:
  - (a) administering to the subject a therapeutically effective amount of an antagonist to said receptor; and/or
  - (b) administering to the subject a nucleic acid molecule that inhibits the expression of the nucleotide sequence encoding said receptor; and/or
  - (c) administering to the subject a therapeutically effective amount of a polypeptide that competes with said receptor for its ligand.
15. A process for diagnosing a disease or a susceptibility to a disease in a subject related to expression or activity of TR7 polypeptide of claim 10 in a subject comprising:
  - (a) determining the presence or absence of a mutation in the nucleotide sequence encoding said TR7 polypeptide in the genome of said subject; and/or
  - (b) analyzing for the presence or amount of the TR7 polypeptide expression in a sample derived from said subject.
16. A method for identifying agonists to TR7 polypeptide of claim 10 comprising:
  - (a) contacting cells produced by claim 9 with a candidate compound; and

- (b) determining whether the candidate compound effects a signal generated by activation of the TR7 polypeptide.
- 17. An agonist identified by the method of claim 16.
- 5 18. The method for identifying antagonists to TR7 polypeptide of claim 10 comprising:
  - (a) contacting said cell produced by claim 9 with an agonist; and
  - (b) determining whether the signal generated by said agonist is diminished in the presence of a candidate compound.
- 10 19. An antagonist identified by the method of claim 18.
- 20. A recombinant host cell produced by a method of Claim 9 or a membrane thereof
- 15 expressing a TR7 polypeptide.